

REMARKS

Applicants respectfully request further examination and reconsideration in view of the instant response. Claims 1-22 remain pending in the case. Claims 1-22 are rejected. Claims 16 and 17 are amended herein. No new matter has been added.

DRAWINGS

The drawings are objected to because the word "Subsystem" in element 203 is misspelled. A replacement sheet correcting the spelling is submitted herewith.

SPECIFICATION

The specification is amended herein to address the informalities.

CLAIM OBJECTIONS

Claim 16 is amended herein to address the informality.

35 U.S.C. §112, second paragraph

Claims 11 and 17 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to Claim 11, the Examiner asserts that the limitation “said redundant fan cooling system” of the second line of the claim lacks sufficient antecedent basis. Applicants respectfully note that the first line of the claim recites “[a] redundant fan cooling system”. Therefore, Applicants respectfully submit that the limitation “said redundant fan cooling system” of the second line of Claim 11 has sufficient antecedent basis, and thus overcomes the rejection under 35 U.S.C. §112, second paragraph.

With respect to Claim 17, the Examiner asserts that the limitation “said second fan” of the last two lines of the claim lacks sufficient antecedent basis. Applicants have amended Claim 17 herein. Therefore, Applicants respectfully submit that Claim 17 overcomes the rejection under 35 U.S.C. §112, second paragraph.

35 U.S.C. §103(a) - Claims 1-9, 11-16 and 18-22

Claims 1-9, 11-16 and 18-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent 6,791,836 by Cipolla et al., hereinafter referred to as the “Cipolla” reference, in view of United States Patent 5,414,591 by Kimura et al., hereinafter referred to as the “Kimura” reference. Applicants have reviewed the cited references and respectfully submit that the embodiments of the present invention as recited in Claims 1-9, 11-16 and 18-22 are patentable over the combination of Cipolla and Kimura for at least the following rationale.

Applicants respectfully assert that the combination of Cipolla and Kimura does not teach, describe or suggest the invention as claimed because the combination of the Cipolla and Kimura does not satisfy the requirements of a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings" (MPEP 2142). Moreover, "[i]t is improper to combine references where the references teach away from their combination" (MPEP 2145; *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)). In particular, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006)" (MPEP 2143.01). Applicants respectfully note that "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention" (emphasis in original; MPEP 2131.02; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

Furthermore, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima*

facie obvious” (emphasis added) (MPEP 2143.01; *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Moreover, “[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed amendment” (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Applicants understand Cipolla to disclose a fan module including two or more individual fans and a processor for controlling the two or more individual fans (Abstract). With reference to Figure 4 of Cipolla, “[p]referably, the processor 116 controls the speed of each fan 102 when the temperature detected falls below a predetermined temperature set point. However, the processor 116 can also control the fans 102 based upon a predetermined relationship between the fan speed and temperature” (col. 5, lines 1-5). Applicants understand Cipolla to teach that processor 116 can control the speed of each fan independently, based on a current state of the operating environment in which a particular fan 102 is located. In particular, Applicants respectfully submit that intended purpose of Cipolla is to provide a fan module in which the individual fans can be controlled based on the operating environment. In other words, Applicants submit that the principle of operation of Cipolla is to provide active control of the fans, and thus the operating environment in which the fans are operational.

In contrast, Applicants understand Kimura to disclose “[a] magnetic disk storage system in which magnetic disk drives can be cooled effectively, and even if a blast device for one of [the] magnetic disk drives fall into trouble or cease operation, a temperature rise of this magnetic disk drive can be suppressed to the minimum. For this purpose, in the magnetic disk storage system containing a plurality of magnetic disk drives, [blast] devices [are] provided for each of the disk drives, and the disk drives are separated by partitions in which openings are formed so that the cooling air can be passed between adjacent magnetic disk drives” (Abstract). Specifically, Applicants understand Kimura to teach that in the event of the failure of a blast device, e.g. a fan, the corresponding magnetic disk drive can still receive some cooling air through an opening in a partition to separating an adjacent disk drive.

In particular, Applicants respectfully submit that the magnetic disk storage system of Kimura includes blast devices that are not independently controllable. Kimura specifically discloses a system in which failure of a blast device is compensated for, to some extent, by providing openings in partitions separating adjacent magnetic disk drives. Moreover, the system of Kimura does not require detection of the failure by a processing device. Rather, the supplemental cooling is provided based on the pressure of the airflow, in that the pressure is lower on the side of the partition associated with the failed blast device, allowing air to pass through the opening from an adjacent fan (see col. 5, lines 35-61). Indeed, Applicants respectfully submit that intended purpose of Kimura is to provide the

supplemental cooling passively. In other words, Applicants submit that the principle of operation of Kimura is to provide passive supplemental cooling in the event of a blast device failure.

Applicants note that while an embodiment of Kimura does provide a detector for detecting the operational condition of a fan, this detection is only used for informing a user of a failed fan for replacement. In particular, as shown in Figure 26, signal line 22 only provides signal transmission in one direction, from detector 21 to control circuit 23 for providing some type of output signal (col. 14, lines 45-62).

Applicants respectfully submit that modifying Cipolla in the manner suggested by the Examiner would render Cipolla inoperable for its intended purpose. For instance, Cipolla discloses a fan module for actively controlling individual fans based on operating conditions. In contrast, Kimura discloses a system in which fan failures are passively accounted for by providing openings in partitions separating adjacent magnetic disk drives. As recited above, “[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention” (MPEP 2131.02). Applicants respectfully submit that by modifying Cipolla in the manner suggested by the Examiner, the active control of the fans would be eliminated, thus rendering Cipolla inoperable for its intended purpose.

Moreover, Applicants respectfully submit that Kimura teaches away from combination with Cipolla as suggested by the Examiner. For instance, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to combine the teachings of Kimura directed towards passive supplemental cooling with the active fan control of Cipolla, as the passive functionality of Kimura teaches away from the active control of Cipolla.

Furthermore, Applicants note the Examiner's assertion that "making elements of an apparatus separable fails to patentably distinguish this invention over the prior art. (See MPEP § 2144.04.V.B)" and "that it would have been obvious to one of ordinary skill in the art at the time of the invention to make the motor removable from the fan cooling system" (see Office Action mailed December 8, 2006, page 5, lines 14-19). MPEP 2144.04 recites "if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court. Examples directed to various common practices which the court has held normally require only ordinary skill in the art and hence are considered routine expedients are discussed below. If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection" (emphasis added).

Applicants assume that the Examiner intended to cite MPEP § 2144.04.V.C ("Making Separable") rather than MPEP § 2144.04.V.B ("Making

Integral”), as this section uses the same terminology utilized by the Examiner. Applicants respectfully submit that the cited passage, directed toward a lipstick holder with a removable cap, is not sufficiently similar to those in the instant application. Therefore, Applicants respectfully submit it would not have been “obvious to one of ordinary skill in the art at the time of the invention to make the motor removable from the fan cooling system”, as asserted by the Examiner.

In view of the combination of Cipolla in view of Kimura not satisfying the requirements of a *prima facie* case of obviousness, Applicants respectfully submit that independent Claims 1, 11 and 18 overcome the rejection under 35 U.S.C. § 103(a), and that these claims are thus in a condition for allowance. Applicants respectfully submit the combination of Cipolla in view of Kimura also does not teach or suggest the additional claimed features of the present invention as recited in Claims 2-9 that depend from independent Claim 1, Claims 12-16 that depend from independent Claim 11, and Claims 19-22 that depend from independent Claim 18. Therefore, Applicants respectfully submit that Claims 2-9, 12-16 and 19-22 also overcome the rejection under 35 U.S.C. § 103(a), and are in a condition for allowance as being dependent on an allowable base claim.

35 U.S.C. §103(a) - Claims 10 and 17

Claims 10 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cipolla, in view of Kimura, further in view of United States

Patent Application Publication 2003/0112600 by Olarig, et al., hereinafter referred to as the "Olarig" reference. Claim 10 is dependent on Independent Claim 1 and Claim 17 is dependent on Independent Claim 11. Applicants have reviewed the cited references and respectfully submit that the embodiments of the present invention as recited in Claims 10 and 17 are patentable over the combination of Cipolla, Kimura and Olarig for at least the following rationale.

Applicants respectfully assert that the combination of Cipolla, Kimura and Olarig does not teach, describe or suggest the invention as claimed because the combination of the Cipolla, Kimura and Olarig does not satisfy the requirements of a *prima facie* case of obviousness. So as to not unnecessarily duplicate arguments, Applicants respectfully direct the Examiner to the remarks accompanying the discussion of the rejection of Claims 1-9, 11-16 and 18-22 above for a detailed argument as to the lack of suggestion or motivation to modify the teachings of Cipolla in the manner asserted by the Examiner. Moreover, Applicants respectfully submit that Olarig does not overcome the shortcomings of Cipolla and Kimura in providing a suggestion or motivation to modify Cipolla as suggested by the Examiner.

In view of the combination of Cipolla in view of Kimura, further in view of Olarig, not satisfying the requirements of a *prima facie* case of obviousness, Applicants respectfully submit that independent Claims 1 and 11 overcome the rejection under 35 U.S.C. § 103(a), and that these claims are thus in a condition

for allowance. Applicants respectfully submit the combination of Cipolla in view of Kimura, further in view of Olarig, also does not teach or suggest the additional claimed features of the present invention as recited in Claim 10 that depends from independent Claim 1 and Claim 17 that depends from independent Claim 11. Therefore, Applicants respectfully submit that Claims 10 and 17 also overcome the rejection under 35 U.S.C. § 103(a), and are in a condition for allowance as being dependent on an allowable base claim.

CONCLUSION

Based on the arguments presented above, Applicants respectfully assert that Claims 1-22 overcome the rejections of record and, therefore, Applicants respectfully solicit allowance of these Claims.

Respectfully submitted,

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